

but the descriptions are interesting and often spirited. The amount of facts collected from various sources, and the practical acquaintance with the plants possessed by the author, concur to render this little volume very acceptable to the scientific botanist as well as the general reader. Twenty plates, illustrative of the most striking forms, are given; the drawing of them is tolerable; but we must exclaim against the abuse of the art of chromolithography exhibited in the blue and dingy-yellow tinting. This, however, is a small matter. We might suggest to the author, as he claims a scientific value for the substance of his work, to add to a second edition a systematic table of contents, and, if possible, a synopsis of the genera.

*Museum of Economic Botany, or a Popular Guide to the Museum of the Royal Gardens of Kew.* By Sir W. J. HOOKER, Director. Longman & Co. 1855.

In most departments of human activity, practice at the outset far outstrips Science, who, advancing cautiously, rule and measure in hand, carefully surveys each step of ground over which she asserts her mastery. It is long before she thus reduces under law and order the extensive tracts discovered in the arbitrary *forays* of practice into the region of the unknown; but a time comes when practice does not find it so easy to descend into "pastures new," and when increased difficulties of existence render it no longer profitable to waste strength in tentative excursions. Then Science assumes her native pre-eminence, and becomes the leader and law-giver.

This truth obtains in the science which deals with vegetables, or at least is beginning to become manifest. Advice and instruction are now sought from the botanist when new materials are required for textile fabrics, for paper, for supplying oleaginous substances, &c.; and this demand upon the scientific man is one that must necessarily increase.

The vegetable substances indigenous, or commonly cultivated in the countries inhabited by civilized nations, have long formed but a portion of those used for purposes of manufacture or as articles of luxury. We find many products mentioned in the Greek and Roman writers as obtained from the "East," the real nature and sources of which were unknown, and enveloped in mysterious or fantastic fables. In the middle ages, and more especially after the discovery of the New World and the Cape passage, these substances multiplied rapidly in commerce. When botanical travellers at length began to carry scientific curiosity into distant regions, some progress was soon made in the discovery of the sources of the gums, woods, fibres, and similar materials, which, though well known to the dry-salter or the cabinet-maker, were stumbling-blocks to the botanist. The formation of museums was another important step to the regularization and accumulation of knowledge thus acquired; but it can hardly be said that this department of the science had been the object of a worthy systematic pursuit until of late years.

The formation of the Museum of Economic Botany in the un-

rivalled Gardens of Kew—constituting a most valuable and characteristic feature of an institution of which the British botanist has good reason to be proud—made an epoch in the study of vegetable products, and a glance at the pamphlet before us shows the remarkable progress that has been made in a few years. This Museum, founded in 1847, has already outgrown its original tenement, wherein it gradually invaded room after room until it filled the house. Another building, of dimensions suited to the growing importance of the collection, is about to be erected in the Gardens. On looking over the multifold objects at present displayed, it is not difficult to distinguish a number of substances whose nature and origin have been revealed through the inquiries set on foot in this Museum,—forming as it does a centre for the reception of information of this kind. New facts, frequently furnished from all parts of the world, are now at once received and enrolled in the chronicles of science, instead of being scattered, often to be lost, in books of travels and private letters; and new or rare products are no longer buried in private collections of “curiosities,” occupants of the drawing-room in one generation, of the lumber-room and the rubbish-heap in the next.

The objects were at first arranged in the Kew Museum according to their structure or uses. This was found inconvenient in many respects; especially that of requiring repetitions, when, as is not uncommonly the case, the same plant yields substances of very varied uses. The objects are now arranged in cases devoted to the natural orders of plants; a plan not only more consistent with scientific notions, but really conveying much more knowledge to the ordinary observer. The pamphlet which has served as the text of these remarks is a *catalogue raisonné* of the objects now exhibited. It contains a vast amount of information compressed into a small compass, much of which is new, and founded upon letters received with the objects from correspondents in all parts of the world;—much collected from works with which botanists only are acquainted, and many of which are not easily accessible. As an authoritative index to the useful substances furnished by the various orders of vegetables, this little book is not merely an indispensable guide to the Museum for which it was compiled, but it will be found a most valuable *aide-mémoire* by all those who are occupied with this department of knowledge. Further, as it indicates the boundaries of our present acquaintance with exotic vegetable products, it is most desirable that it should be in the hands of all travellers, and all residents abroad whose tastes and opportunities allow of their devoting attention to natural objects.

*A Handbook to the Marine Aquarium.* By P. H. GOSSE.  
London: Van Voorst. 1855. 12mo.

The great importance of the Aquarium as a means of extending our knowledge of marine zoology is now so generally admitted, that there is little need for us to dwell upon it. Since the principle of